IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Applicant: **Shuo-Yen Robert Li**

Case: **11**

Serial No. **09/881,827**

Filed: **June 15, 2001**

Group Art Unit:

Examiner:

Title of Invention: **A CONDITIONALLY NONBLOCING SWITCH OF THE UPTURNED DECOMPRESSOR TYPE**

THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231

SIR:

Enclosed is a Preliminary Amendment in the above-identified application.

An additional fee is required based on the calculation below for a **small entity**:

CLAIMS AS AMENDED

	CLAIMS REMAINING AFTER AMENDMENT	CLAIMS PREVIOUSLY PAID FOR	EXTRA	RATE	ADDITIONAL FEE
Total Claims	21	21	0	$9.00	$ 0.00
Indep. Claims	2	3	0	$40.00	$ 0.00

Multiple Claims First Presented with this Amendment = 0	$0

Total: $0.00

Also enclosed herewith for filing in connection with the enclosed application are:

XX   Return Postcard

Respectfully submitted,

John T. Peoples

John T. Peoples (Reg. No. 28,250)
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(908) 580-9816

Date: **9-8-01**

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Certificate of Mailing Under 37 CFR 1.8(a)

I hereby certify that this correspondence is being deposited by me on
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Date of Certificate

John T. Peoples

John T. Peoples

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Gordon

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Title of Invention: **A CONDITIONALLY NONBLOCKING SWITCH OF THE
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**THE COMMISSIONER OF PATENTS AND TRADEMARKS
WASHINGTON, D.C. 20231**

SIR:

PRELIMINARY AMENDMENT

Enclosed is a Preliminary Amendment in the above-identified application.
Please amend the application as follows.

In the Specification:

Replace pages 8 and 9 with the following:

-- SUMMARY OF THE INVENTION

The shortcomings of the prior art, as well as other limitations and

deficiencies, are obviated in accordance with the present invention by applying algebraic

principles to the physical realization of a large switching fabric based upon contemporary

technologies.

In accordance with a broad method aspect of the present invention, a

method for implementing a class of N×N upturned decompressors each serving a

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connection request to route m incoming signals, m≤N, and for enabling the service of any

connection request in a nonblocking way on the condition that the connection request is

compliant to certain constraints, the method for each of the upturned decompressors

includes: (a) configuring a switch defined by a set of connection states and having an

array of N input ports with N distinct input addresses and an array of N output ports with

N distinct output addresses wherein the m incoming signals arrive at m distinct input

ports determining m active input addresses and are destined for corresponding m distinct

output ports determining m active output addresses, and wherein said constraints on the

connection request are that: (1) the m active input addresses are consecutive upon a

rotation of the ordering of the N input addresses, and (2) the correspondence between the

m active input addresses and the m active output addresses is order reversing after the

rotation; and (b) routing the incoming signals from the m distinct input ports to the

corresponding m distinct output ports by activating one of the connection states such that

the activated one of the connection states accommodates the connection request subject to

said constraints on the connection request.

In accordance with a broad system aspect of the present invention, a class

of N×N upturned decompressors each serving a connection request to route m incoming

signals, m≤N, and for enabling the service of any connection request in a nonblocking

way on the condition that the connection request is compliant to certain constraints, each

of the upturned decompressors includes: (a) a switch defined by a set of connection states

and having an array of N input ports with N distinct input addresses and an array of N

output ports with N distinct output addresses wherein the m incoming signals arrive at m